

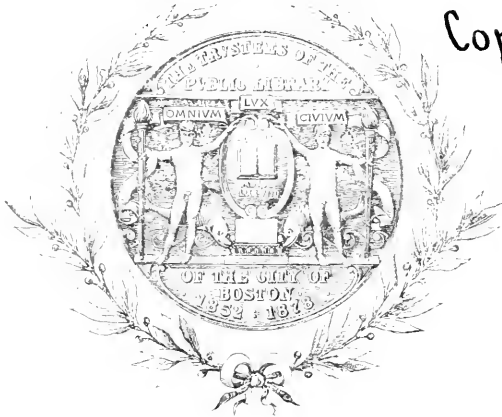
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THE SAUGUS IRON WORKS

AT

LYNN, MASS.



ADDRESSES

*At the Presentation to the City of Lynn of the
First Casting Made in America.*

— BY —

C. J. H. WOODBURY, OF LYNN.

JOHN E. HUDSON, OF BOSTON.

ACCEPTANCE BY

HON. ELIHU B. HAYES, MAYOR OF LYNN.

November 21, 1892.

LYNN, MASS.:

PRESS OF THOS. P. NICHOLS,

1892.

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THE SAUGUS IRON WORKS AT LYNN.

ADDRESS BY C. J. H. WOODBURY, OF LYNN.

MR. MAYOR:

A few months ago I learned that Messrs. Arthur and Llewellyn Lewis, the owners of the kettle well known as being the first casting made at the Saugus Iron Works, were seriously considering the acceptance of one of several offers recently made for its purchase; and as it appeared to me that this article, which was the precursor of the vast iron industry in America, should be kept at Lynn, where it properly belonged as a relic most closely affiliated with the early history of our town, I at once purchased the kettle.

Some of the citizens to whom the facts were submitted at a later day joined in the expenses involved in the purchase and mounting of the kettle in a suitable case for its presentation to the city; but before the whole affair was consummated, John E. Hudson, Esq., now a resident of Boston, but born in Lynn, and for many years a resident of this city, claimed the privilege of making the gift to his birthplace.

His interest in the matter was a deep one, as he is a direct descendant of Thomas Hudson, the owner of the site upon which the Saugus Iron Works were built, and his request was conceded by the original subscribers, who now offer the case in which the kettle is placed for safe preservation.

The case is presented by Messrs. Charles H. Aborn, George E. Barnard, Hon. Francis W. Breed, Hon. William A. Clark, Jr., Charles A. Coffin, Alfred Cross, Benjamin W. Currier, B. V. French, William G. S. Keene, Patrick Lennox, John T. Moulton, William H. Niles, E. Wilbur Rice, Jr., Joseph N.

Smith, Benjamin F. Spinney, Henry B. Sprague, Joseph F. Swain, David H. Sweetser, Henry F. Tapley, Charles B. Tebbetts, Prof. Elibu Thomson, Col. Roland G. Usher, C. J. H. Woodbury, John P. Woodbury and Mark J. Worthley.

As the kettle is an example of the state of the art of iron founding in 1642, so the tablet, forming the rear of the case, is also typical of the skill of American foundrymen in 1892. It is as it came from the mould at the foundry of the Magee Furnace Company, at Chelsea, untouched by tools, and has been treated by the Bower-Barff process, converting the surface into the magnetic oxide of iron to prevent corrosion.

In designing this tablet, I introduced some original features, particularly in the ground-work of the face, of which the pattern was woven bamboo, and the back is in like manner an impression of plaited straw, instead of the tooled surfaces, which are used for similar tablets. It forms the back of a glass case, in the middle of which the kettle is hung from a small crane projecting diagonally from one side of the tablet.

The kettle weighs two pounds and four ounces, and holds nearly a quart.

The tablet bears the following inscription :

THE FIRST CASTING MADE
IN AMERICA.
SAUGUS IRON WORKS
1642.
PRESENTED TO THE CITY OF LYNN
BY
JOHN E. HUDSON,
A DESCENDANT OF
THOMAS HUDSON,
THE OWNER OF THE SITE OF THE
IRON WORKS, TO WHOM THE FIRST
CASTING WAS GIVEN.
THIS CASE PRESENTED BY
CITIZENS OF LYNN.
1892.

It may be very naturally asked what is the evidence warranting the presumption that this kettle is as claimed, the first casting made at the Saugus Iron Works.

It is true that this article lacks the stamp and attested record of many witnesses, but like Plymouth Rock, and many other important relics of American history, it depends in part upon tradition in a generation devoid of sentiment or personal interest, which might introduce possible elements of error.

Tradition has preserved for the world much of its history, essential principles of law, and even vital points in both Jewish and Christian religion.

The design of the kettle is that of a type used in the earliest colonial days, but in its physical characteristics it bears evidence of being made of iron cast directly from the ore as reduced in a blast furnace, and not from pig iron remelted in a reverberatory or a cupola furnace; and there is no evidence or reason to believe that there was either of these furnaces at the Saugus Iron Works.

Thomas Hudson owned sixty acres of land on the westerly bank of the Saugus River, at the present sites of Scott's and of Pranker's mills, and he sold this land to the Company of Undertakers for the Iron Works. He claimed in consideration the first article made at the works, and although not given to idealisms, this kettle was kept by him and his descendants in the male line for over a century, when it passed in the fourth generation to Mary (Hudson) Lewis, who gave it to her daughter, Mary Lewis, and she in turn gave it to her nephews, Arthur and Llewellyn Lewis, from whom the purchase was made.

These two brothers well remember the story of the kettle as told by their grandmother, who prized this kettle as an heirloom, whose history had, in a like manner, been related to her by her grandparents.

The first published record of this kettle is contained under date of 1642, in the History of Lynn, by Alonzo Lewis, 1844, p. 122. The same is included in Lewis' and Newhall's History of Lynn (1890), page 208, and is referred to in every history treating of the Saugus Iron Works. The Standard History of Essex County, C. F. Jewett (1878), of which the chapters upon Lynn were prepared by the late Cyrus Mason Tracy, contains (page 246) a description of this kettle; and I have in my possession a manuscript written by Mr. Tracy in 1881, in which that able antiquary

eloquently referred to it as "the humble prototype of the immense iron industry that now extends over our land."

Further references on this subject may be made to Vol. I, page 408. of the History of Essex County, Massachusetts (J. W. Lewis, Philadelphia, 1888), in which the chapters on Saugus were written by Wilbur F. Newhall, Esq.

The Saugus Iron Works were such an important factor in the inception and early development of American industries that their early history merits due consideration. This was not the first attempt at iron smelting, but the first success.

The expectancy for mineral wealth was universal among the early explorers of America. Every royal charter, patent, grant or commission contained exact provisions for the division of precious and base metals, in which the privy purse was to share largely. The avaricious Spaniards expected gold, and abased Columbus because he had not found it in fabulous plenty. The later Spanish explorers pillaged enough gold in Mexico and Peru to trample out the Aztec civilization, and in turn ruin themselves.

The outline of the western Atlantic littoral had not been fully established before Spanish romancers pictured the unknown lands with strange peoples, who submissively yielded to the conquerors, and bestowed upon them a plethora of precious metals.

The thrifty English were not blind to the attraction of mineral wealth, and sought the less alluring but more valuable iron, although that metal was unknown to the Indians, save in a few instances recently discovered by Prof. F. W. Putnam, where the mound-builders fashioned meteoric iron into ornaments or implements. (Report of the Trustees of the Peabody Museum, Cambridge, Vol. III., pages 172, 202, 407, 425).

The earliest reference to iron ore in America is contained in the History of the Second Expedition to Virginia, by Thomas Harriot, in 1586, wherein he says in reference to Roanoke Island: "Wee founde neere the water side the ground to be rockie which by the trial of a mineral man was founde to hold iron richly. It is found in manie places of the country else." The hostility of the natives was so intense that the Colonists soon returned to England without developing the mines.

The Jamestown Colony mined and sent iron ore to England as early as 1608 (W. F. Durfee, *American Industries Since Columbus*, page 146). In 1622, they built iron works at Falling Creek, a tributary of the James River, about seventy-six miles from Jamestown, for the purpose of reducing bog iron ore. The works had approached completion, when the Indians attacked the settlement, killing three hundred and fifty persons and burning the buildings, March 22, 1622. Thus the enterprise, for which skilled men had been especially sent to the Jamestown Colony from England, was abandoned. (*History of the Iron Manufacture in all Ages*, page 104, James M. Swank, Philadelphia, 1892.)

The Massachusetts Bay Company, at a meeting in London, March 2, 1628, considered the advisability of sending Malbon to New England to prospect for iron ore, and he was at Salem in 1629, but it is not known that he ever reported any discoveries.

The bog iron deposits in the upper Saugus meadows were discovered by Thomas Dexter, one of the Colonists, and he informed his fellow-townsmen, Captain Robert Bridges, who went to London and formed the Company of the Undertakers for the Iron Works, which was started under the management of these two men, with Joseph Jenks, one of the best workmen of the day, as master mechanic.

Captain Robert Bridges was one of the leading men of the settlement, having been entrusted with diplomatic offices on the part of the Colony of Massachusetts Bay, and of whom it was said by Nathan M. Hawkes, "No man who lacked suavity and winning social manners could have persuaded calculating London merchants to have ventured their dearly loved funds in an iron works experiment across the Atlantic in a savage and unknown land." (*Magazine of American History*, Vol. XXV, page 150.)

The site of the iron works was well selected, being situated at the head of navigation, by the ford in the highway from Boston to Salem, at a water-power, and near to the bog iron ore deposits, whose exact location is unknown, save that they were in Adam Hawkes' meadows. The whole iron works tract probably covered three thousand acres; all of which was situated in that portion of the town of Lynn known by its original name of

Saugus, which it resumed as a legal matter when it was set off from Lynn in 1815. The whole territory now including Lynn and its five surrounding towns, was at the first called Saugus, but the name was changed to Lynn by act of the General Court, November 15, 1637, yet various portions, as Saugus, Swampscott, and Nahant, always retained these local names.

The General Court granted them at various times immunity from import or export duties, and from taxation, and other privileges. I believe that the act of October 14, 1645, is the earliest instance of legislation upon the principles of protection to manufacturers, which has been such an important feature in the development of American industries. The act is a long document, but the following extracts are of especial interest.

“5. * * They shall have free liberty to transport the same (their iron) by shipping to other parts or places of the world, and to make sale thereof. * * * Provided they sell it not to any person or state in actual hostility with us.

“7. It is also granted that the undertakers and adventurers, together with their agents, servants, and assigns, shall be and are hereby free from taxes, assessments, contributions and other public charges whatsoever, for so much of their stock and goods as may be employed in and about the said Iron Works, for and during the period of twenty-one years yet to come from the date of these presents.”

There is not any detailed description of the works and the exact methods employed, but there is much light thrown upon these matters in the voluminous records of continual legislation and litigation, which took place during the forty-six years that the works were in operation.

The works contained a blast furnace, in which bog iron ore was reduced by means of charcoal, using as a flux lime, which in the earliest days of the works was obtained from the oyster shells, which then abounded on the coast of Massachusetts Bay. Cannon were also melted at this foundry, far in advance of the time when swords were to be beaten into plough-shares, or spears into pruning-hooks.

The iron from the blast furnace was run into straight trenches in the sand, and thereby cast into long triangular bars called

“sowe iron,” which were converted into wrought iron and steel. Castings were made directly from the metal flowing from the blast furnace into a pool, whence it was dipped by crucibles and poured into the moulds. The cupola furnace was not invented until 1790.

The manufacture of wrought iron and steel must have been entered upon contemporaneously with that of cast iron, as John Endicott, of Salem, the first Governor of Massachusetts Bay, wrote to Governor John Winthrop, at Boston, December 1, 1642: “I wish to hear much of your son’s iron and steel;” the son being John Winthrop, Jr., who was interested in the Saugus Iron Works.

The wrought iron and steel were made in a blomary, which may be described as a charcoal fire four feet thick in a blacksmith’s forge. The end of a bar of sow iron was plunged into the fire, and in time a pasty mass of wrought iron would settle to the bottom. Other portions of the bar would be converted into steel when the process stopped at the intermediary stage between cast and wrought iron. This process of steel-making is still used throughout the Oriental nations, and also in the mountainous region south of the Ohio River.

The iron works also included a machine shop, in which the first fire engines made in America were built for the Town of Boston, in accordance with a vote of the town meeting, March 1, 1654, that “The select (men) have power and liberty to agree with Joseph Jynks for Ingins to convey water in case of fire, if they see cause so to do.” (Brayley, History Boston Fire Department, 1889, page 7.)

Although the Iron Works were in operation very soon after building was commenced, yet additions were made during a number of years. In 1645, an order of the General Court shows that the works had “some tons of sowe iron cast and some others in readiness for the forge,” and letters of Governor Winthrop in August and September, 1648, state that the furnace produced seven to eight tons per week. The principal product was bar iron “as good as the Spanish,” costing £20 per ton, also axes and agricultural implements.

When Governor John Endicott began the Oak Tree and Pine

Tree coinage in 1652, the dies were made by Joseph Jenks at the Saugus Iron Works. (Early Coins of America, S. S. Crosby, Boston, 1875, p. 79.)

It is stated by Judge James R. Newhall that the designs were made by Elizabeth, the wife of Joseph Jenks, the master mechanic. (Liñ, 1880, p. 78.) This coinage, bearing the stamp "Massachvsetts State" without any reference to the throne, was probably the first fundamental act of independence to the Mother Country. The colonists were driven to such a course by the lack of money, as exchanges were for the most part carried on in barter with bullets and wampum serving for small coin.

Joseph Jenks also invented a sawmill, which received a patent for fourteen years from the General Court on June 10, 1646, being the first patent granted in America, and also a water engine for mills, which was undoubtedly a form of water wheel and not the hydraulic engine which that term would now signify.

He also invented the modern American scythe, long and narrow and stiffened by a ridge along the back, a marked improvement "for the more speedie cutting of grasse" over the broad short bushwack scythe made from a thin plate of steel, and richly deserved the patent for seven years which was granted by the General Court, May 23, 1655.

In 1667 he petitioned the General Court relative to a wire manufactory; and May 15, 1672, his petition for authority to coin money was refused.

The litigation to which the Iron Works were subjected increased and became oppressive. It appears as if the impulse to "sue the corporation" was instinctive among the townspeople. The corporation, its managers, and its workmen were proceeded against under every conceivable excuse. The boundaries of worthless land, poor crops on sterile soil, unrestrained courtships, speaking lightly of the Governor, reproachfully of the Church and harshly of the King, were all subjects of long continued and bitter litigation.

Land was sold to the corporation and afterwards further damages claimed. Dexter brought suit because the alewives did not come into his net below the dam as of yore; and Hawkes sued because the water rose too high above the dam. The town sued

the corporation for pew rents in a meeting-house several miles distant, and notwithstanding the immunity in the act of October 14, 1645, already quoted in part, won the case. The pews could not have been worn much for the courts took action against the managers for not attending public worship.

The works are not known to have been in operation after 1688, when the tract had diminished to six hundred acres and passed into individual ownership. If the supply of bog iron ore had been sufficient for the works, they would undoubtedly have been continued the same as other enterprises of that day in various parts of New England.

The immediate return to those engaged in the enterprise is now of little moment, but the results to the whole Colony of an establishment which attracted, developed and then scattered a body of skilled mechanics were of great importance and no doubt may have been an essential factor in rearing many prominent industries.

The grass-covered mounds of ashes and dross along the banks of the Saugus River are the only vestige of those busy works, and serve as an uninscribed monument to the mechanical pioneers of America.



THE FIRST CASTING MADE
IN AMERICA.

SABCO'S IRON WORKS,
1642.

PRESENTED TO THE CITY OF LYNN
BY

JOHN E. HODSON,

A DESCENDANT OF

THOMAS HODSON,

THE OWNER OF THE SITE OF THE
IRON WORKS TO WHOM THE FIRST
CASTING WAS GIVEN.

THIS CASE PRESENTED BY
CITIZENS OF LYNN.

1892.

ADDRESS

BY JOHN E. HUDSON, OF BOSTON.

MR. MAYOR :

Mr. Woodbury has told us so fully the history of the Iron Works at Saugus, the evidences of the genuineness of this kettle as the first casting there made, and the circumstances which have brought us together, that there is, I think, nothing to be added by me beyond the formal act of transferring the title to the city.

As to my part in the matter, perhaps I may say that I was engaged in some inquiries into matters relating to Thomas Hudson, and in the course of them was on the track of this kettle and endeavoring to buy it—my offer, I do n't doubt, was one of the offers to which Mr. Woodbury refers—and in this way I came to know what Mr. Woodbury and his associates had in hand. I need not say that I appreciate the courtesy shown in yielding to my suggestion that there was a certain fitness in the gift coming from a descendant of the original owner, and in allowing me to pay for and present the kettle to the city.

It remains, then, only to sum up and say that the relic is one which should be preserved ; that it must be unique in its kind as the first fruits of an industry which has grown to such vast proportions, and that its proper resting place is in the City Hall of the town within the borders of which the works were established and the casting was made ; and trusting that your Honor agrees with me in these views, I beg to offer the kettle to the city for its acceptance.

If one might express a hope, it would be that the city's acceptance of this will encourage the bringing together of such other

mementos of that early time as may still be extant. If whatever there is of this kind could be brought into view ; if examples of furniture as illustrative of the habits of the time could be collected ; if diaries, if such exist, could see the light, and old accounts and old papers could be copied ; much, I think, might be done towards gathering the material for a history of that early time before it should be altogether lost. The city would, I do n't doubt, furnish a proper place for the care of such things. Might it be hoped that the city would see its way to printing the early volumes of records which still remain? as an example and a stimulus to collecting, before it is too late, all that can now be collected that relates to the early settlement. All this would make a proper history of Lynn possible, and she should have a better history than has yet appeared. I think the story is worth telling in a better way than it has ever yet been told.

I beg your acceptance of the kettle.

Address of Acceptance,

BY HON. ELIHU B. HAYES, MAYOR OF LYNN.

GENTLEMEN :

It is well to pause in the rush and strife of our busy lives to consider matters like these, which have been called to our attention to-night, and reflect upon what we owe to the sturdy men who planted new industries and a new form of government on these sterile shores. It is fitting, too, that we should consider anew the starting of the first Iron Industry in America at a time when we are about to open the largest iron foundry in New England near by the site of the works where this kettle was cast. I have been much interested in the historical facts presented by Mr. Woodbury. These facts call to our minds in a forcible manner the debt we owe to those sturdy pioneers whose descendants we are, and the fruits of whose industry and intelligence we enjoy. We are coming more and more to realize the debt we owe them. They not only inaugurated a form of government which enabled us to grow up the most prosperous people on the earth, but the influence of the idea first tested by them has influenced, elevated and humanized every government under which civilized men live.

I was impressed also by the suggestion of Mr. Hudson, that it is well to preserve such relics as this in public places, that the attention of the young people just coming on the stage of action may be called to the beginning of our industries. There is no better work that can be done in a public way than to furnish the people in our communities with steady and profitable employment. As these early people have worked and sacrificed to inaugurate and establish industries, so should we use our best

endeavors in a public and private way to encourage business, to promote industrial organizations, and encourage all in their efforts to furnish profitable employment.

I have enjoyed much the exercises of this occasion, and for myself and for the people of the city I thank the gentlemen who have by their efforts and generous donations preserved this relic of the industrial past for the encouragement and instruction of this and coming generations. It will gain an added interest as time goes on.

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